

**UNITED STATES DEPARTMENT OF COMMERCE****United States Patent and Trademark Office**

Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/631,412	08/03/00	KING	J IGB 1531

IM31/0803

DARA L ONOFRIO ESQ
C/O THE LAW OFFICES OF DARA L ONOFRIO
SUITE 270
233 BROADWAY
NEW YORK NY 10279-2799

EXAMINER

SHOSHO, C

ART UNIT

PAPER NUMBER

1714

DATE MAILED:

08/03/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
09/631,412

Applicant(s)
King et al.

Examiner
Caille Shosho

Art Unit
1714



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on _____
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 35 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above, claim(s) 1-16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 17-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claims 1-30 are subject to restriction and/or election requirements.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☒ All b) ☐ Some* c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- *See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892) 18) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 16) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948) 19) ☐ Notice of Informal Patent Application (PTO-152)
- 17) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 3-5 20) ☐ Other:

Art Unit: 1714

DETAILED ACTION

Election/Restriction

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-16, drawn to recording medium, classified in class 428, subclass 195.
 - II. Claims 17-30, drawn to ink jet printing method, classified in class 347, subclass 105.

2. The inventions are distinct, each from the other because:

Inventions I and II are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case, the process for using the product as claimed can be practiced with another materially different product such as a recording (receiving) medium which comprises only an ink receiving layer and no protective layer, recording medium which comprises other layers in addition to the ink receiving layer and protective layer such as subbing layer, adhesive layer, backing layer, etc. or a recording medium which is simply paper.

Art Unit: 1714

3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification and/or have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

4. During a telephone conversation with Dara Onofrio on 7/26/01 a provisional election was made with traverse to prosecute the invention of Group II, claims 17-30. Affirmation of this election must be made by applicant in replying to this Office action. Claims 1-16 withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

5. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a petition under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Specification

6. Applicant is reminded of the proper language and format for an abstract of the disclosure.

Art Unit: 1714

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 250 words. It is important that the abstract not exceed 250 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

In the present application, the abstract comprises two paragraphs, not one as required.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

8. Claims 17, 19, 25-26, and 29-30 are rejected under 35 U.S.C. 102(a) as being anticipated by EP 858905.

Art Unit: 1714

EP 858905 discloses an ink jet printing method comprising (i) printing onto an ink jet recording sheet which comprises substrate, ink receiving layer, and upper protective layer which comprises particulate resin having film-forming temperature greater than 50° C and binder such as polyvinyl alcohol and (ii) heating the printed image. It is further disclosed that the protective layer is coated onto the ink receiving layer and that aqueous inks are used to print the image on the recording medium (page 3, lines 10-13, 31, and 51-52, page 4, lines 25-26 and 44-47, page 5, lines 25-27, page 6, lines 1-12, and example 2).

In light of the above, it is clear that EP 858905 anticipates the present claims.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35

U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Art Unit: 1714

10. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

11. Claims 17, 19, 21-26, and 29-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Higuma et al. (U.S. 5,140,339) in view of Shaw-Klein et al. (U.S. 6,147,139).

Higuma et al. disclose an ink jet printing method comprising printing onto an ink jet recording sheet which comprises substrate, ink receiving layer, and upper protective layer which comprises resins including binder such as polyvinyl alcohol and particulate polymer such as polyolefin. It is further disclosed that the protective layer is coated onto the image receiving layer and that aqueous inks are used to print the image on the recording medium (col.2, lines 56-66, col.3, lines 1-6, col.5, lines 13-32 and 43-58, and col.8, lines 13-15). Although there is no disclosure of the film-forming temperature of the particulate polymer such as polyolefin, it is well known, as found in references such as Mizukami et al. (U.S. 5,856,000) that film-forming temperature of polyethylene is 90° C.

Art Unit: 1714

The difference between Higuma et al. and the present claimed invention is the requirement in the claims of heating the printed image.

Shaw-Klein et al., which is drawn to ink jet printing, disclose that after printing onto the ink jet recording sheet, the printed image is heated by passing through a laminator wherein an inert sheet such as polyester film is in contact with the recording sheet when passed through the laminator in order to impart high gloss to the printed image (col.9, lines 3-28).

In light of the motivation to heat the printed image through lamination disclosed by Shaw-Klein et al., it therefore would have been obvious to one of ordinary skill in the art to heat the printed image produced in the ink jet printing method of Higuma et al. in order to produce a printed image with high gloss, and thereby arrive at the claimed invention.

12. Claims 17-18, 21-24, and 26-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shibahara et al. (U.S. 6,001,463) in view of Shaw-Klein et al. (U.S. 6,147,139).

Shibahara et al. disclose an ink jet printing method comprising printing onto an ink jet recording sheet which comprises substrate, ink receiving layer, and upper protective layer which comprises resins including binder such as gelatin and particulate polymer having particle size of 10-30 μm including polyolefin such as polyethylene. It is clear that the broad disclosure of polyolefin by Shibahara et al. encompasses the use of copolymers including ethylene/acrylic acid as presently claimed. It is further disclosed that the protective layer and the image receiving layer

Art Unit: 1714

are coated simultaneously onto the substrate and that aqueous inks are used to print the image on the recording medium (col.2, lines 56-66, col.3, lines 1-6, col.5, lines 13-32 and 43-58, and col.8, lines 13-15). Although there is no disclosure of the film-forming temperature of the particulate polymer such as polyolefin, it is well known, as found in references such as Mizukami et al. (U.S. 5,856,000) that film-forming temperature of polyethylene is 90° C.

The difference between Shibahara et al. and the present claimed invention is the requirement in the claims of heating the printed image.

Shaw-Klein et al., which is drawn to ink jet printing, disclose that after printing onto the ink jet recording sheet, the printed image is heated by passing through a laminator wherein an inert sheet such as polyester film is in contact with the recording sheet when passed through the laminator in order to impart high gloss to the printed image (col.9, lines 3-28).

In light of the motivation to heat the printed image through lamination disclosed by Shaw-Klein et al., it therefore would have been obvious to one of ordinary skill in the art to heat the printed image produced in the ink jet printing method of Shibahara et al. in order to produce a printed image with high gloss, and thereby arrive at the claimed invention.

13. Claims 17, 19, 20-25, and 29-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bodager et al. (U.S. 5,984,467) in view of EP 858905.

Bodager et al. disclose an ink jet printing method comprising (i) printing onto an ink jet recording sheet which comprises substrate, ink receiving layer, and upper protective layer which

Art Unit: 1714

comprises binder such as polyvinyl alcohol and additional polymer and (ii) subjecting the printed image to lamination under heat and pressure wherein an inert sheet such as polyester film is in contact with the recording sheet when passed through the laminator. Given that Bodager et al. disclose method as presently claimed, it is clear that such lamination would intrinsically produce a stable image-protecting coating wherein the final image has high gloss. It is further disclosed that the protective layer is coated onto the image receiving layer and that aqueous inks are used to print the image on the recording medium (col.2, lines 22-29 and 63, col.3, line 55-col.4, line 35, col.6, lines 52-61, col.7, line 48, col.14, lines 20-27 and 53-62).

The difference between Bodager et al. and the present claimed invention is the requirement in the claims of polymer particles having film-forming temperature of 60⁰-140⁰ C present in the protective layer.

EP 858905, which is drawn to ink jet recording method, disclose the use of particulate polymer which has film-forming temperature of greater than 50⁰ C in the protective layer in order to produce protective layer which has good water resistance and lightfastness (page 3, lines 51-52, page 4, lines 44-46, and page 6, lines 7-8).

In light of the motivation for using specific type of polymer in protective layer of ink jet recording sheet disclosed by EP 858905 as described above, it therefore would have been obvious to one of ordinary skill in the art to use such polymer in the protective layer of the recording medium in the ink jet printing method of Bodager et al. in order to produce a printed image with good water resistance and lightfastness, and thereby arrive at the claimed invention.

Art Unit: 1714

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Mukoyoshi et al. (U.S. 6,242,082) and Hirose et al. (U.S. 6,203,899) both disclose ink jet recording sheet comprising substrate, ink receiving layer, and protective layer, however, there is no disclosure of the film-forming temperature of the polymer in the protective layer and no disclosure of heating the printed image.

Mizukami et al. (U.S. 5,856,000) disclose film-forming temperature of polyethylene.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Callie Shosho whose telephone number is (703) 305-0208. The examiner can normally be reached on Mondays-Thursdays from 7:00 am to 4:30 pm. The examiner can also be reached on alternate Fridays.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan, can be reached on (703) 306-2777. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-3599.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



Callie Shosho

8/1/01


VASU JAGANNATHAN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700